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ABSTRACT

The study reported in this paper inquired about the extent to which perceptions of teacher leadership were influenced by factors similar to those that influence perceptions of transformational principal leadership. The study consisted of a survey of all staff members in one large school district and interviews with teachers in six secondary schools. First, analysis of survey data from 2,727 elementary and secondary teachers suggested that both principal and teacher leadership had a significant influence on important features of the school. Overall principal leadership seemed to be about a third stronger than teacher leadership. Second, the independent influence of teacher leaders was strongest (and stronger than the principal's influence) with respect to school planning, and the structure and organization of the school. Principal leadership exercised its strongest independent influence on planning, structure, and organization, as well as on school mission and school culture. Finally, interview data with secondary teachers painted a portrait of teachers viewed as leaders by their teaching colleagues in terms of their traits, capacities, and practices. The composite teacher leader was warm, dependable, self-effacing with a genuine commitment to the work of colleagues and the school, and had well-honed interpersonal skills. In addition, the teacher leader possessed the technical skills required for program improvement and used them in concert with a broad knowledge of education policy, subject matter, the local community, and the school's students. (Contains 48 references.) (ND)

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Draft

Distributed Leadership In Secondary Schools

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Distributed Leadership In Secondary Schools

Shared decision making and teacher professionalization are key elements of many school restructuring plans (Murphy, 1991). Both elements require teachers routinely to exercise more leadership outside the classroom than traditionally has been expected of them. Summed up by Conley (1993, p. 246), the motivations for advocating such leadership include: the possibilities for reflecting democratic principles of participation in the workplace; enhancing teachers' satisfaction with their work; increasing teachers' sense of professionalism; stimulating organizational change; providing a route to increased organizational efficiency; and revitalizing teachers through increased interaction with their colleagues.

While some teachers always have exercised informal leadership with their colleagues in their schools (Lortie, 1975, p. 194), the nature of such leadership has rarely been made explicit through systematic inquiry until quite recently. But formal advocacy of school-level leadership by teachers provides a more compelling incentive for such inquiry than has previously existed. This incentive arises, for example, from the need to revise the content of teacher in service and pre service preparation, to supplement the criteria typically used in teacher selection and evaluation, and to reconceptualize the nature of the teaching career (Fessler, 1992; Huberman, 1989).

The purposes of the study reported in this paper were threefold. One purpose was to inquire about the nature of the leadership exercised by teachers in secondary schools engaged in significant restructuring efforts. The study also aimed to estimate the relative influence on the school of principal as compared with teacher leadership. Identifying those aspects of the school

which seemed most susceptible to the influence of leadership exercised by teachers was the final purpose of the study.

Conceptual Background

Limited amounts of prior evidence about distributed leadership in secondary schools prevented us from developing a framework for testing in this study (Strauss & Corbin, 1990). Nonetheless, there were four areas of relevant theory and research which shaped collection and interpretation of data. These included prior research on teacher leadership, transformational school leadership, variables influencing teacher leaders' perceptions, and variables mediating leader effects. This section briefly describes each of these lines of theory and research and indicates the ways in which we considered them to be associated with distributed secondary school leadership.

Teacher Leadership

Leadership, suggests Sirotnik and Kimball (1996), does not take on new meaning when qualified by the term "teacher". It entails the exercise of influence over the beliefs, actions, and values of others (Hart, 1995), as is the case with leadership from any source. What may be different is how that influence is exercised and to what end. In a traditional school, for example, those in formal administrative roles have greater access than teachers to positional power in their attempts to influence classroom practice, whereas teachers may have greater access to the power that flows from technical expertise. Traditionally, as well, teachers and adminstrators often attempt to exercise leadership in relation to quite different aspects of the school's functioning, although teachers often report a strong interest in expanding their spheres of influence (Taylor & Bogotch, 1994; Reavis & Griffith, 1993).

Teacher leadership may be either formal or informal in nature. Lead teacher, master teacher, department head, union representative, member of the school's governance council, mentor - these are among the many designations associated with formal teacher leadership roles. Teachers assuming these roles are expected to carry out a wide range of functions. These functions include, for example: representing the school in district-level decision making (Fullan, 1993); stimulating the professional growth of colleagues (Wasley, 1991); being an advocate for teachers' work (Bascia, in press); and improving the school's decision-making processes (Malen, Ogawa & Kranz, 1990). Those appointed to formal leadership roles also are sometimes expected to induct new teachers into the school, and to positively influence the willingness and capacity of other teachers to implement change in the school (Fullan & Hargreaves, 1991; Whitaker, 1995).

Teachers exercise informal leadership in their schools by sharing their expertise, by volunteering for new projects, and by bringing new ideas to the school. They also offer such leadership by helping their colleagues to carry out their classroom duties, and by assisting in the improvement of classroom practice through the engagement of their colleagues in experimentation and the examination of more powerful instructional techniques. Teachers attribute leadership qualities, as well, to colleagues who accept responsibility for their own professional growth, promote the school's mission and work for the improvement of the school or the school system (Harrison & Lembeck, 1996; Wasley, 1991; Smylie & Denny, 1990).

Empirical evidence concerning the actual effects of either formal or informal teacher leadership are limited in quantity and report mixed results. For example, many of the more ambitious initiatives establishing formal teacher leadership roles through the creation of career ladders have been

abandoned (Hart, 1995). And Hannay and Denby's (1994) study of department heads found that they were not very effective as facilitators of change largely due to their lack of knowledge and skill in effective change strategies. On the other hand, Smylie & Brownlee-Conyers (1992) found that increased participation of teachers in school decision making resulted in a more democratic school. Increased professional learning for the teacher leader also has been reported as an effect of assuming such a role (Wasley, 1991; Lieberman et al, 1988).

The exercise of teacher leadership is inhibited by a number of conditions. Time taken for work outside of the classroom likely interferes with time needed for students (Smylie & Denny, 1990). When extra time is provided for leadership functions, it is usually not enough (Wasley, 1991). Furthermore, the lack of time, training and funding for leadership roles (Cooper, 1988; White, 1992) interferes with teachers' personal lives, as well as their classroom work. Cultures of isolationism, common in schools, inhibit the work of teacher leaders with their teaching colleagues, as do the associated norms of egalitarianism, privacy, politeness, and contrived collegiality (Duke et al, 1980; Hargreaves, 1994, Sirotnik, 1994; Griffin, 1995). Teacher leaders' effectiveness is constrained by lack of role definition (Smylie & Denny, 1990) and by requiring them to take on responsibilities outside their areas of expertise (Little, 1995) .

Functions reported for teacher leaders in this literature created expectations about what we might find were the functions of teacher leaders in our study.

Transformational Leadership

Uncertainties about the specific purposes and practices associated with many restructuring initiatives and the importance attached to fundamental organizational change call for commitment-building forms of school leadership with a systemic focus. We have used this line of reasoning in our own efforts to clarify the nature, causes, and consequences of a transformational model of leadership adapted for use in schools (e.g. Leithwood, 1994). From a transformational perspective, higher levels of personal commitment to organizational goals and greater capacities for accomplishing those goals are assumed to result in extra effort and greater productivity (Burns, 1978; Bass, 1985). Authority and influence are not necessarily allocated to those occupying formal administrative positions, although much of the literature adopts their perspective. Rather, power is attributed by organization members to whomever is able to inspire their commitments to collective aspirations, and the desire for personal and collective mastery over the capacities needed to accomplish such aspirations.

Current educational leadership literature offers no unitary concept of transformational leadership. Kowalski and Oates (1993), for instance, accept Burns' (1978) original claim that transformational leadership represents the transcendence of self-interest by both leader and led. Dillard (1995, p. 560) prefers Bennis' (19xx) modified notion of "transformative leadership - the ability of a person to 'reach the souls of others in a fashion which raises human consciousness, builds meanings and inspires human intent that is the source of power'". Leithwood (1994) used another modification of Burns, this one based on Bass' (1985) two-factor theory in which transactional and transformational leadership represent opposite ends of the leadership continuum. Bass maintained that the two actually can be complementary.

Leithwood identified seven factors that make up transformational leadership. Hipp and Bredeson (1995), however, reduced the factors to five in their analysis of the relationship between leadership behaviors and teacher efficacy. Gronn (1996) notes the close relationship, in much current writing, between views of transformational and charismatic leadership, as well as the explicit omission of charisma from some current conceptions of transformational leadership.

The model of transformational leadership which has developed from our own research in schools conceptualizes transformational leadership along seven dimensions: building school vision; establishing school goals; providing intellectual stimulation; offering individualized support; modelling best practices and important organizational values; demonstrating high performance expectations; creating a productive school culture; and developing structures to foster participation in school decisions (Leithwood, 1994). Each dimension is associated with more specific leadership practices and the problem-solving processes used by transformational leaders has also been described (Leithwood & Steinbach, 1993). A recent review of empirical research on transformational school leadership offers modest amounts of evidence for the contributions of such leadership to student participation in school, a variety of psychological teacher states mediating student learning (eg. professional commitment, job satisfaction), as well as organization-level effects such as collective professional learning, and the development of productive school climates (Leithwood, 1996).

Most models of transformational leadership are flawed by their underrepresentation of transactional practices (which we interpret to be "managerial" in nature) because such practices are fundamental to organizational stability. For this reason, we have recently added four

management dimensions to our own model based on a review of relevant literature (Duke & Leithwood, 1994). These dimensions include: staffing, instructional support, monitoring school activities, and community focus.

Because these conceptions of school leadership seemed especially productive in school contexts like the ones in which the present study was carried out, we were curious about the extent to which teacher leadership reflected key managerial and transformational leadership practices typically associated with principals.

Leadership Perceptions

A central premise for the design of this study is derived quite directly from the definition of leadership as an influence process. As Lord and Maher (1993) argue, for example, such influence depends on a person's behavior being recognized as, and at least tacitly acknowledged to be, "leadership" by others who thereby cast themselves into the role of followers; in Greenfield's (1995) terms, they "consent" to be led.

Lord and Maher (1993) offer a cognitive explanation for the judgements people make about whether or not someone is a leader. According to this account, salient information about people is processed in two possible ways. One way is to match that information to categories, or leadership prototypes (knowledge structures) already stored in long term memory. This "recognition" process on the part of the follower is triggered by observed or otherwise encountered information about the traits and behaviors of another person potentially to be perceived as a leader. These observed traits and behaviors are compared with the traits and behaviors included in the relevant knowledge structure stored in the follower's long-term memory, his or her implicit or explicit leadership theory. Relatively high levels of

correspondence between observed and stored traits and behaviors leads to the follower's perception of the other person as a leader.

Followers' assessments of correspondence may occur in a highly automatic fashion. This is likely in cognitively demanding, face-to-face encounters between followers and leaders when speed and efficiency of processing is demanded by the complexity or sheer amount of stimuli to be understood. Under cognitively less demanding circumstances, followers' assessments of correspondence may be more controlled, reflective and self-conscious.

Followers may also develop perceptions of leaders through "inferential" processes. Such processes depend on the opportunity for followers to observe events in which the potential leader is involved, to assess the outcomes of those events, and to draw conclusions about the contribution of the potential leader to those outcomes. Perceptions of persons as leaders result from followers' judgements that those events were somehow salient, that they had desirable results, and that the potential leader was instrumental in bringing about those results. As with recognition processes, inferential processes may occur relatively automatically or through more controlled processes.

Recognition and inference processes are not mutually exclusive and may occur in cycles. For example, one's initial leadership knowledge structures are likely the result of inference processes applied through considerable social interaction in both a broad cultural context and the more specific contexts of those organizations in which one participates. Even relatively primitive leadership structures or prototypes, once developed, are then available for use through recognition processes. And the leadership perceptions, formed initially through recognition, may be modified inferentially with opportunities to observe the leader's work.

Two recent studies using an adaptation of Lord and Maher's model (Jantzi & Leithwood, 1996; Leithwood & Jantzi, in press) provide evidence concerning the factors that account for teachers' perceptions of transformational leadership among principals. Results of these studies suggest that school conditions were the most powerful variables explaining teacher's leader perceptions. Described more fully below, these conditions encompass the school's mission, vision, and goals; culture; programs and instruction; policies and organization; decision-making structures; and resources. Visibly contributing to each of these school dimensions in ways that teachers find helpful is likely to be interpreted by teachers as a sign of transformational leadership. This interpretation seems likely whether the leader is male or female, young or old; long or short serving in the school; and whether the school is small or large, elementary or secondary.

These results led us to inquire, in our present study, about the extent to which perceptions of teacher leadership were influenced by factors similar to those which influence perceptions of transformational principal leadership.

Variables Mediating Leader Effects

Most of the effects of school leadership on students are mediated by other features of the school (Hallinger & Heck, 1996). A significant challenge for leadership research is to identify those features known to have direct effects on students and to inquire about the nature and strength of the relationship between them and leadership. This challenge had to be addressed in the quantitative portion of the present study because its purposes included estimating the effects of teacher leadership on the school and determining which aspects of the school were most influenced by such leadership.

Those school-level (non classroom) features selected as mediating variables were identified through a previously conducted, far- ranging, review of literature concerning school and district effects (Leithwood & Aitken, 1995). Seven school-level variables, each including a number of specific sub dimensions and many more associated characteristics, emerged from this review as having important consequences for school effectiveness. These included the school's mission and vision, school improvement planning processes, culture, structures for decision making, information collection and decision making processes, policies and procedures, and school-community relations. In the larger study from which quantitative data for this study were derived, the combined effects of these variables accounted for a small but significant proportion of the variation in several different types of student outcomes (Leithwood, Jantzi, & Haskell, in preparation).

Method

Quantitative and qualitative methods were combined for this study. These methods included a survey of all staff members in one large school district and interviews conducted with teachers in six secondary schools *(at the time of preparing this paper, only the interviews from teachers in two of these schools had been analyzed and our report is limited to this subset of interviews).*

Survey Data

Instruments. Data for the quantitative portion of the study came from surveys of teachers and principals in one large school system in the Canadian province of Ontario. The instruments, which were developed to collect data on a number of variables of interest in a larger study, contained 243 items

measuring the constructs used in this study: dimensions of transformational leadership, and school characteristics mediating leadership effects (Leithwood & Aitken, 1995). Teachers responded to these items by rating the school characteristics on a five-point scale (strongly disagree to strongly agree). In addition, teachers rated the extent of influence from different sources of leadership in the school on a four-point scale from minimal to very strong. These data provided the measures of principal influence and the leadership influence of teachers working both individually and in groups.

Sample. The extensive number of items required for the larger study necessitated the use of a matrix sampling plan for distribution of three versions of the teacher survey for elementary teachers and four versions for the secondary teachers; each version collected data on at least three of the variables in the framework. The 1818 elementary and 909 secondary teachers participating in the study were 61% of the 4456 teachers within the district. Data for all the variables in this study were complete for 96 elementary and 16 secondary schools, which was a 97% response rate for the 116 district schools. Four elementary schools were dropped from the analysis due to missing data.

Data Analysis. Data for purposes of this study were the aggregated responses of individual teachers to the survey described above. SPSS was used to aggregate individual responses by school and then to calculate means, standard deviations, and reliability coefficients (Cronbach's alpha) for all the scales measuring the variables.

Two types of quantitative analyses were carried out to help answer questions raised in this part of the study. The first analysis, reported in Table 1, was the calculation of Pearson-product correlation coefficients to estimate the strength of relationships between teacher influence and school variables. The second form of analysis, reported in Table 2, was a series of hierarchical

multiple regressions used to examine the effects of teacher influence on perceptions of school characteristics after controlling for principal influence. In hierarchical multiple regression, independent variables enter the equation in an order specified by the researcher and determined by logic or theory. The proportion of variance accounted for by all of the independent variables is partitioned incrementally by noting the increment in the proportion of variance associated with the variable at its point of entry into the regression model (Tabachnick & Fidell, 1989).

The Interviews

Instrument. A short, semi-structured interview schedule was developed which asked individual teachers about colleagues whom they had nominated as leaders: why they were viewed as leaders, what they did to provide leadership, and what it was about them that made them leaders (the interview also asked how teacher leaders influenced their colleagues' work and how principals developed teacher leadership, issues not addressed in this paper).

Sample. The qualitative data are from a subset of data collected as part of a longitudinal study of organizational learning in six secondary schools undergoing various change initiatives as a result of government policy and changing fiscal conditions. The researchers meet bi-monthly with representatives from the schools (usually an administrator and one or more staff members) to exchange information about the status of initiatives within their schools or to provide mutual assistance and advice as requested. The idea of conducting a study of distributed leadership emerged in the context of discussions about school leadership and decentralized decision making. A two-stage approach to data collection was approved by the full project team.

First, just over 400 teachers within the six schools were asked to identify, by name on a one-page confidential survey, those people within their schools, exclusive of the principal and vice principals, who provide formal or informal leadership. Questionnaires were returned by 170 staff members, of which 138 were useable. Thirty-two respondents could not be included in the analyses because they listed roles rather than people or did not enter their own names and so were ineligible for the second stage. The names of those people nominated as school leaders were plotted on grids, one for each school, with nominators on the X-axis and nominees on the Y-axis. Nominees were rank-ordered by the number of nominations received, with those receiving the most nominations at the top of the list.

The second stage of the qualitative portion of our study began with the selection of a sample of 85 teachers who were to be interviewed for 40 to 60 minutes each. For the larger study, approximately 14 interviewees per school were selected from among teachers who nominated at least one of the top three nominees. For this study, transcripts for a sub-set of 18 teachers in two schools, one urban and one semi-rural, were selected for the purpose of clarifying the concept of distributed leadership. Although the focus for the interview was the three leaders nominated most frequently in each school, teachers were asked an identical set of questions about all 59 of their nominees.

Data Analysis. Interviews were audiotaped and transcribed on computers. The project team decided on four main coding categories (see Table 3) after review and discussion of several transcripts. Two researchers coded the 18 transcripts independently and then met with a third researcher to review codes and reach consensus on the code assigned to each comment. Frequency of mentions was then calculated for each code, as reported in Table 3.

Analyses of the remaining 65 transcripts will continue for the purpose of developing case studies of informal school leaders in all six schools based on the concept of distributed leadership reported in this paper.

Interviews were coded in relation to three categories of leadership qualities:

- traits: unchanging, internalized characteristics;
- capacities: knowledge, skills and abilities;
- practices: overt behaviors, functions, tasks, and activities.

Also coded were teachers perceptions of the outcomes they associated with the exercise of leadership by their teacher colleagues.

Results

Survey Results

The purpose of the survey data was to help answer two of the three questions giving rise to this study: What is the relative influence on the school of principal as compared with teacher leadership? and Which aspects of the school are influenced most by the leadership of teachers?

Table 1 reports the means and standard deviations for teacher ratings of school characteristics. Scale reliability coefficients (Cronbach's alpha) were all well within an acceptable range at .91 or higher. The overall mean rating for school characteristics was 3.85 on a 5-point scale indicating that teachers generally agreed that their school had the characteristics of an effective and innovative school, although that agreement was not very strong. Highest ratings, with identical means of 4.04, were given to School Culture and the Information Collection and Decision-making process within the school. Rated lowest were School Planning (M = 3.61) and Structure and Organization

(M = 3.58). Variation in ratings among schools was highest for School Mission (SD = .49).

Table 1 also reports Pearson-product correlations estimating the strength of relationships between ratings for school characteristics and influence of teacher leadership within the school. All relationships were statistically significant and at least moderately strong. Schools in which teachers were seen to provide more influential leadership were also schools which teachers perceived to be more effective and innovative, as reflected in the correlation between Teacher Influence and mean rating of School Characteristics (r = .61). Teacher Influence had the strongest relationship with School Planning (r = .65) and Structure and Organization (r = .58), which were the characteristics teachers perceived to be least evident in their schools. A finding that may be somewhat surprising was the relatively weaker relationship between Teacher Influence and School Culture, (r = .41); although the influence of teacher leaders was significantly related to a stronger culture, this relationship was weaker than with five other school characteristics and stronger with only two others.

Table 2 displays the results of regression analyses done to determine how much of the variation in teachers' perceptions of characteristics of effective and innovative schools was accounted for by the influence of teacher leaders as compared with principal influence. Seven separate analyses were done with the overall mean of a specific characteristic as the dependent variable in each analysis. Principal Influence was always entered into the regression first in order to determine what Teacher Influence contributed on its own. These data are reported in the first and third columns of Table 2. Although the amount of variation explained is different in the case of each dependent variable, all regression coefficients were statistically significant.

The first row in Table 2 indicates that Principal Influence explained 38% of the variation in School Characteristics as a whole and that, on its own, teacher influence explained an additional 23% of the variation in ratings of characteristics. The six characteristics comprising the school mean are presented on Table 2 in order from most to least variation explained by Teacher Influence after controlling for effects of Principal Influence. The pattern for Principal Influence is quite different from that for Teacher Influence. Although for several characteristics teacher and principal influence explain similar proportions of the variance, for most characteristics the proportions explained are quite different with more variance explained by the influence of principals.

The characteristics for which Teacher Influence explained the most variance were School Planning (31%), as well as Structure and Organization (25%). Not only were their variances most affected by the influence of teacher leaders, they also were two of the three characteristics for which the influence of principals had less effect than did that of teacher leaders. The explanatory patterns for School Mission and Culture were almost identical: Principal Influence explained just over 20% of the variation and Teacher Influence explained about an additional 10%.

Although not reported in tables 1 or 2, ratings of principal influence were more strongly associated with teachers' perceptions of the extent to which the leadership they experienced from all sources in the school was transformational in nature. Perceptions of transformational leadership practices explained 42% of the variation in principals' leadership influence compared with only 33% of the influence of teacher leaders. Similarly, principals' leadership influence was more strongly associated with perceptions of effective school management than was teacher leadership

influence, explaining 54% and 20% of the variation respectively. These results suggest that school staffs tend to hold modestly different expectations for principal as compared with teacher leadership.

In sum, while the principal's leadership was more influential than the leadership exercised by teachers, the leadership of teachers had a significant, independent influence on the school. Furthermore, these two sources of leadership had their greatest influence on partly overlapping aspects of the school. In the case of principals, the independent influence of their leadership was greatest on school planning, school structure and organization, school mission, and school culture. The independent effects of teacher leadership were felt most in respect to planning, and structure and organization. School staffs expect different forms of leadership to be exercised by principals as compared with teachers.

Interview Results

The primary purpose for the interview data was to clarify the nature of the leadership provided by teachers in their schools. More precisely, these data identify the traits, capacities, and practices observed by colleagues which cause them to attribute leadership to a teacher. Interview data also identify what teachers perceive as the outcomes of leadership on the part of their colleagues.

Traits

Seventy-five specific traits were identified from a total of 341 units of coded text. These traits were further classified as mood, values, orientation to people, physical characteristics, responsibility, personality, and work-related traits. Table 3 indicates the frequency of mention of each of these dimensions.

The most frequently mentioned (23) specific trait was "quietness"; being unassuming and soft-spoken was highly valued by these teachers. The next most frequently mentioned specific traits were: having a sense of committment to the school and/or the profession (21); having a sense of humour (14); being a hard worker (14); and possessing an appreciative orientation to others (13).

Personality characteristics were mentioned 69 times . This category of trait included being unselfish (9), intelligent (9) , genuine (7), humble (5), and energetic (4). Values were mentioned 58 times and included commitment to the school and/or profession (21), having strong beliefs (11), and being fair (9). Mood, mentioned 53 times, included being quiet (23), having a sense of humour (14), and being even-tempered (6). Work ethic also was mentioned 53 times, a category which included: being determined (7), not appearing to be "empire-building" (7), being a visionary (6), and having high standards (5). Responsibility was discussed 34 times. This category included: being a hard worker (14), being steady (8), and being dependable (6). Physical characteristics, being tall or big, were mentioned only three times.

Capacities

The category "capacities" encompasses a leader's knowledge, skills, and/or abilities. One hundred and fifty-nine items coded in this category were organized into seven dimensions: procedural knowledge; declarative knowledge; relationships with staff; problem-solving ability; relationships with students; communication skills; and self-knowledge.

The most frequently mentioned skills were associated with procedural (44) and declarative (43) knowledge. Procedural knowledge had to do with a teacher's knowledge of how to carry out leadership tasks, e.g., making tough

decisions, knowing how to run a meeting, and dealing with administration. As teachers said, "[she] can put out fires without too much trouble"; "[he] knows how to handle a situation without implicating anyone else"; or "[she] knows how to evaluate our students, modify programs, develop report cards."

The declarative knowledge category refers to knowledge about specific aspects of the profession, e.g. knowledge about government education policy, knowledge about education in general; knowledge about the school, students, and the community; knowledge about specific subjects; and knowledge about union issues.

Teachers' ability to work well with their colleagues, a valued category of leadership capacities mentioned 21 times, included statements about how a particular teacher can motivate staff, work effectively with others, and be willing to moderate disagreements.

Being a good problem solver was seen as an important leadership capacity, mentioned 18 times. For example, one teacher said, "[she] can listen to a discussion and, in the end, filter it all down to what the real problems are." Getting to the heart of the matter or being able to synthesize information was mentioned five times. Dealing with difficulties well and being able to think things through are other examples of statements coded as problem-solving skills.

The capacity to relate well with students, particularly being able to motivate them and being able to understand them, were coded 15 times. Having good communication skills was mentioned 11 times. This dimension included being articulate and persuasive. Statements coded as self-knowledge referred to a leaders ability to change, and to "know what she is doing." "[She] knows she can't win all of her battles."

Practices

Practices refer to what teachers perceived to be what leaders actually do. These functions, tasks, and activities, mentioned 385 times, were organized into 9 dimensions. The most frequently mentioned dimension (93 coded statements) was that the teacher performs administrative tasks, such as working administrative periods in the office, being on committees, and organizing specific events (e.g. running the commencement and spearheading the implementation of special courses). With 68 mentions, modelling valued practices is the next most frequently mentioned dimension. This included: leading by example, interacting with students, being a motivator for staff and students, and never missing a day of work. One teacher said, "he sets the example that there are many teachers who have taught for a long time and who are excellent teachers." Another said, "he reminds us of our objectives."

Formal leadership responsibilities was mentioned 49 times. This dimension reflects the number of times teachers were nominated as leaders because of their position, e.g. being a department head or being head of a particular committee. Supporting the work of other staff was mentioned 47 times; this referred to the help the teacher provided to his or her colleagues (e.g., helps young teachers, helps with course outlines, helps with a difficult class) or the support given to staff (e.g., "kind of stroking people and saying you can do it", "speaks out on our behalf whether we agree or disagree", "allows people to vent").

Teachers felt being visible in the school was an important dimension of leadership. Examples of this practice include: presenting information at staff meetings and being a leader in the school not just in the department. Specific teaching practices (e.g., having lessons well prepared and being a good

teacher) were mentioned 44 times. Confronting issues directly (21), sharing leadership with others (9), and personal relationships (8) were the last three dimensions of practices mentioned by the interviewees.

Outcomes

The outcomes associated with leadership provide important clues about the basis for leader attributions under circumstances in which leadership is experienced long enough to draw inferences from leader effects on the organization not simply on existing leader stereotypes. Outcomes of leadership identified by "followers" tell us something about the needs people have which they hope leadership can meet.

One hundred and sixty-two statements were coded as 9 different dimensions of outcomes. Most frequently mentioned (48) was gaining the respect of staff and students. Next most frequently identified as a leadership outcome (34) was that activities involving the leader were invariably implemented well ("it went off very well" or "things always work out in the end" or "he and [T] have taken the track team to extreme heights"). The fact that people listen to the leader was mentioned 16 times; one interviewee said, for example, "when she speaks up, people listen."

Being widely perceived as a leader was mentioned 15 times. One teacher said, " people turn to him for leadership in the school". Another said, "I think he's someone they would turn to if they were looking for avenues to proceed". A desire to emulate the leader was mentioned 13 times: "She makes you want to put as much effort forth as she does"; "You're just saying, hey, if I could be like that". Having a good effect on students (12), contributing to the culture of the school, "he adds to the heart of the school"

(10), enhancing staff comfort level (9), and meeting high expectations (5) are other types of outcomes mentioned.

Summary and Conclusion

Three purposes were served by this study. One purpose was to estimate the relative influence on the school of principal leadership as compared with teacher leadership. Analysis of survey data from a sample of 2727 teachers suggests that both principal and teacher leadership have a significant influence on important features of the school. Overall, principal leadership seems to be about a third stronger than teacher leadership.

As a second purpose also served by survey data, the study aimed to identify those aspects of the school which seemed most susceptible to influence by teacher leaders. The independent influence of teacher leaders was strongest (and stronger than the principals' influence) with respect to school planning, and the structure and organization of the school. Principal leadership exercised its strongest independent influence on planning, structure and organization, as well as on school mission and school culture. Furthermore, teachers were more likely to associate their principals than their teacher-leader colleagues with effective management and transformational leadership.

The third and most important purpose for this study was to describe the nature of leadership exercised by those teachers viewed as leaders by their teaching colleagues. Interview data painted a portrait of teacher leaders in terms of their traits, capacities and practices. The composite teacher leader is warm, dependable, and self-effacing with a genuine commitment to the work of colleagues and the school. She has well-honed interpersonal skills which are exercised with individuals and groups of colleagues, as well as with

students. In addition, the teacher leader possesses the technical skills required for program improvement and uses them in concert with a broad knowledge base about education policy, subject matter, the local community and the school's students. Armed with a realistic sense of what is possible, this person actively participates in the administrative and leadership work of the school. He is viewed as supportive of others' work and models what the school values.

Although the study was not informed by a prior framework, we were curious about the relationship between our evidence and three other lines of theory and research. Would our data support the results of previous research on teacher leaders' practices? Would teacher leaders' practices reflect elements of a transformational model of school leadership? And, would there be similarities in the variables accounting for teachers' perceptions of principal leadership and their perceptions of teacher leaders?

Evidence from this study does reinforce some results of previous teacher leadership research. For example, teacher leaders were reported to stimulate the professional growth of their colleagues (Wasley, 1991), and to contribute to an improvement in the school's decision making processes (Malen, Ogawa, & Kranz, 1990). They also were perceived to share their expertise, volunteer for new projects, promote the school's mission, and work toward school improvement (Harrison & Lembeck, 1996; Smylie & Denny, 1990).

Although less evident than among principals, according to our interview data, teacher leaders' practices were perceived to reflect many aspects of transformational school leadership (Leithwood, 1994). Most often mentioned were practices encompassed by the dimension of transformational leadership labelled "individualized consideration", a set of practices included in many other leadership models as well (e.g., situational leadership; see Fernandez &

Vecchio, 1996). In addition, teacher leaders provided their colleagues with "intellectual stimulation", " modelled best practices", and helped "develop structures to foster participation in school decisions". Some teachers noted that their leader-colleagues fostered extra effort on their part, a key goal of transformational leadership.

Perceptions of teacher leadership seem to be influenced primarily by the same variables which we found to be the most powerful influences on teachers' perceptions of principals' transformational leadership (Jantzi & Leithwood, 1996; Leithwood & Jantzi, in press). For the most part, these variables were not demographic in nature. Neither gender, age, nor years of experience on the part of either the leader or teacher, for example, influenced teachers' leader perceptions. What was of most influence was the opportunity to work with the leader on projects of significance to the school and to see evidence of the value of this work to the school. Such direct experience of one's teacher colleagues' contribution to the school, also appears to have shaped teachers' choices of colleagues to nominate as leaders.

Evidence from the present study also suggests that colleagues' traits are important in forming teachers' perceptions of their leadership. Because our previous studies of teachers' perceptions of principal leadership did not collect data about traits, we cannot comment on whether principals' traits also influence teachers' perceptions of their leadership. But it seems plausible.

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Table 1

Teacher Ratings of School Characteristics: Means, Standard Deviations, and Correlations with Influence Of Teacher Leaders
(N = 112 Schools)

School Characteristics:	Mean	SD	Correlation with Teacher Leadership
Overall Mean	3.85[1]	.31	.61•••
Culture	4.04	.31	.41•••
Information Collection & Decision Making	4.04	.33	.38•••
Mission	3.89	.49	.45•••
Policy & Procedures	3.78	.26	.37•••
Planning	3.61	.40	.65•••
Structure & Organization	3.58	.40	.58•••

••• $p < .001$

[1] Rating Scale: 1 = Disagree Strongly; 5 = Agree Strongly

Table 2

Effects of Teacher Leadership Influence on School Characteristics After Controlling for the Effects of Principal Influence
(N = 112 Schools)

Block 1: Principal Influence		Block 2: Teacher Influence		Total Equation		Dependent Variables
Adj R^2	F Ratio	R^2 Ch	F Ratio Ch	Adj R^2	FEqn(2,109)	
.38	68.14***	.23	65.50***	.61	86.80***	School Characteristics Mean
.25	38.95***	.31	77.54***	.56	71.80***	Planning
.14	18.47***	.25	45.74***	.39	35.85***	Structure & Organization
.24	35.31***	.12	20.71***	.35	31.18***	Mission
.23	33.81***	.10	15.76***	.32	27.06***	Culture
.12	16.63***	.10	13.38***	.21	15.94***	Information Collection
.06	7.66**	.10	13.59***	.15	11.06***	Policy & Procedures

*** $p < .001$; ** $p < .01$

Note: Each row in the table summarizes one of the nine separate regression analyses run to determine how much of the variation in the eight specific characteristics and overall mean was explained by principal compared with teacher influences. For each analysis, principal influence was entered first, followed by teacher influence as the second step.

Table 3

Leadership Categories: Dimensions Ranked in Order of Frequency

Traits	Capacities	Practices	Outcomes
Orientation to people (71)	Procedural knowledge (44)	Performs administrative tasks (93)	Gains respect of staff and students (48)
Personality (69)	Declarative knowledge (43)	Models valued practices (68)	Things are implemented well (34)
Values (58)	Relationship with staff (21)	Formal leadership responsibilities (49)	Staff will listen (16)
Mood (53)	Problem solver (18)	Supports the work of other staff (47)	Staff looks to him/her for leadership (15)
Work Ethics (53)	Relationships with students (15)	Visible in the school (46)	Makes us want to emulate him/her (13)
Responsibility (34)	Communication skills (11)	Teaching responsibilities (44)	Has good effect on students (12)
Physical Characteristics (3)	Self-knowledge (7)	Confronts issues directly/makes hard decisions (21)	Contributes to the culture of the school (10)
		Shares leadership with others (9)	Enhances staff comfort level (9)
		Personal relationships (8)	Meets high expectations (5)
Total = 341	**Total = 159**	**Total = 385**	**Total = 162**